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# IndustrialNet Industrial Ethernet Fiber Uplink Kit

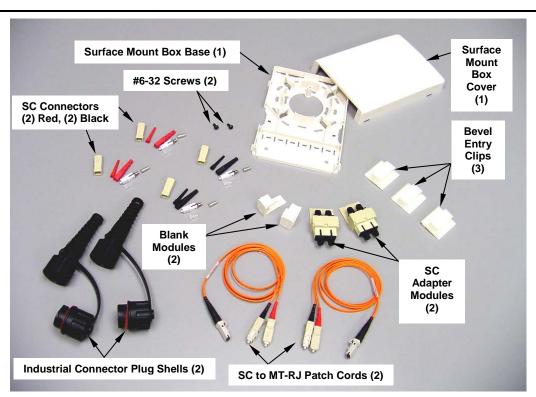
Part Number: IAEFKSC

**INSTALLATION INSTRUCTIONS** 

FS062

#### READ ALL INSTRUCTIONS COMPLETELY BEFORE PROCEEDING

### **COMPONENT IDENTIFICATION**



#### ITEMS REQUIRED FOR ASSEMBLY

ITEM	PART NUMBER	DESCRIPTION	INCLUDED IN KITS	AVAILABLE SEPARATELY
1	BEC38-AT-L0	Bevel Entry Clip	•	
2	CBXF6IW-AY	Mini-Com Fiber Surface Mount Box	•	•
3	CMBIW-X	Mini-Com Blank	•	•
4	CMDEISCIW	SC Duplex Adapter Module	•	•
5	FSCMBL	SC Fiber Optic Multimode Connector, Black Boot	•	•
6	FSCMRD	SC Fiber Optic Multimode Connector, Red Boot	•	•
7	F62ERLSNM001	SC to MT-RJ Patch Cord, 1 Meter Long	•	•
8	MPI588TNP	Industrial Connector Plug Shell	•	
9	FS092*	SC Connector Installation Instructions (*designates the latest document revision level)	•	•
10	FS093*	SC Connector Stripping Template (*designates the latest document revision level)	•	•
11	00534-31	Screw, #6-32 x 5/16 Phillips Head	•	
OPTIONAL	CJAST	Cable Jacket Adjustable Stripping Tool		•
OPTIONAL	FWP-C	Lint-Free Wipes (included in optional FIELDKIT Fiber Optic Termination Kit)		•
OPTIONAL	FSCDVR	Screwdriver (included in optional FIELDKIT Fiber Optic Termination Kit)		•
OPTIONAL	FWBTL	Water Bottle (included in optional FIELDKIT Fiber Termination Kit)		•
REQUIRED	FIELDKIT	Field Polish Fiber Optic Termination Kit (required for SC connector terminations)		•
-	-	Diagonal Cutters (not available from Panduit)		
-	-	Isopropyl Alcohol (Reagent Grade, 90% min. concentration; not available from Panduit)		
-	-	Duplex, Multimode, Fiber Cable with 0.19" (4.8mm) to 0.31" (7.9 mm) Round Outer Jacket (not available from Panduit)		

NOTE: For complete installation, this kit requires the Panduit Industrial Ethernet Enclosure (IAEIP66) and Industrial Ethernet Connector Gland Plate (IAECGP). If not available, the Panduit Industrial TX Bulkhead Connectors (IAEBH5E) and Standard NEMA Knockout Tool (IEKPO30) are required to create a bulkhead feed-thru in the customer panel. The Panduit Field Polish Fiber Optic Termination Kit (FIELDKIT) is required to terminate the Panduit SC Connectors.

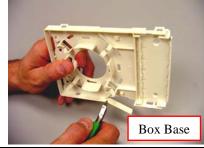
Product Operating Temperature: 0° - 60° C (32° - 140° F)

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### **Assembly of Fiber Uplink Kit (IAEFKSC)**

#### 1. Cut Out Surface Mount Box

Remove the cover of the box from the base. Using diagonal cutters, cut along perforations on the left sides of the base and cover, as shown. Remove cutouts and make sure that no sharp edges remain on the parts after trimming.





#### 2. Install Base of Surface Mount Box

Turn off any internal or remote electronic devices which power the Industrial Ethernet Enclosure (IAEIP66). Position base of box onto mounting plate of Industrial Ethernet Enclosure, so that the 2 holes shown on the plate line up with slots in the base. Secure base of box with two #6-32 screws at locations shown.





#### 3. Insert Modules into Surface Mount Box Base

Position the blank module with the front tilted down as shown. Slide the front of the module toward the front of the box base. The protrusion at the front of the box base will mate into the slot at the front of the module. Push down on the rear of the module to engage the module in the box base. The adapter module is inserted fully when an audible click is heard. Install 2 blank and 2 duplex SC adapter modules, as shown. Remove black dust caps from each SC adapter module.





#### 4. Clean Fiber Connector Ferrule End Faces

Clean connector ferrule end faces of patch cord using a lint-free wipe soaked with isopropyl alcohol (90% minimum concentration). The ferrules should be free of all contaminants and residue. To prevent contamination, do not allow the ferrule to touch anything after cleaning.

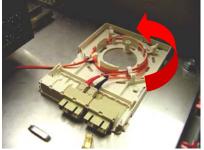




## 5. Connect SC to MT-RJ Patch Cords to Box Base

Insert the 2 SC patch cord connectors into the rear of the SC adapter. Separate the mounting clips from the box base so that the patch cord cable can be easily fed between the clips. Carefully wrap the patch cord around the spool inside the box base twice, making sure that the fiber cable from the SC to MT-RJ patch cord does not get pinched during installation. Repeat this procedure for the second patch cord. Make sure to follow a consistent black/red polarity for each



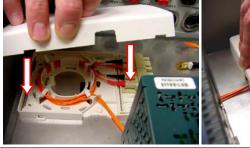


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connector installation.

#### 6. Install Surface Mount Box Cover onto Base

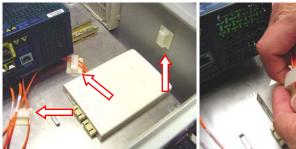
Position the box cover above the box base so that the two cutouts created in Step 1 align to one another. Make sure that the fiber cable from the SC to MT-RJ patch cord does not get pinched during installation. Push down on box cover until all edges of cover snap onto the box base.





#### 7. Install Bevel Entry Clips and Route Cable

Remove the protective liner from the bottom of each Bevel Entry Clip. Position the 3 clips in the locations shown, after cleaning the mounting surfaces with alcohol. Separate the arms of the clip so that the patch cord cable can be easily positioned in the clip. Route the cable to maintain a 1" (25.4mm) minimum bend radius of the fiber.



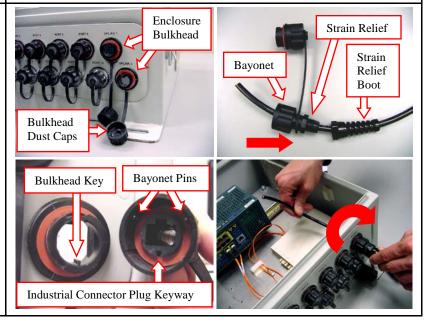
#### 8. Connect MT-RJ Patch Cord Connectors

Insert MT-RJ connectors into the ports on the electronics panel, so that the connector latches are fully engaged. Maintain a proper 1" (25.4mm) minimum bend radius of the fiber.



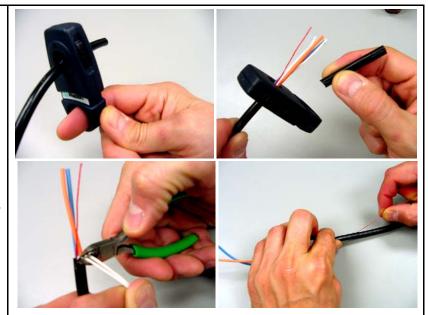
#### 9. Assemble Bulkhead Connection

- 9.1 Remove dust caps from Enclosure Bulkheads located at positions "Uplink 1" and "Uplink 2".
- 9.2 Slide the Strain Relief Boot over the fiber cable. Next, position Bayonet and attached Strain Relief over the fiber cable, as shown. Carefully guide the cable through the circular black rubber ring at the rear of the Strain Relief.
- 9.3 Feed cable completely through the bulkhead opening. Allow enough cable length inside the enclosure for connector termination. Slide the Bayonet and Strain Relief assembly along the cable to mate with the bulkhead. Position the Industrial Connector Plug Shell to the Bulkhead so that the keyway is facing downward and aligns to the bulkhead key. Align the Bayonet Pins onto the raceway grooves of the bulkhead and rotate the bayonet clockwise until the bayonet is fully engaged to the bulkhead.



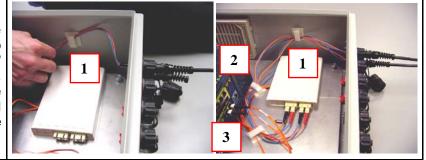
## 10. Strip Round Duplex Fiber Cable and Terminate SC Connectors

- 10.1 Strip the outer jacket of the cable 26" (66cm) back, making sure not to damage or cut the inner fiber jackets. Optional Cable Jacket Adjustable Stripper Tool (CJAST) shown can be purchased separately from Panduit. Carefully cut away any strength members, making sure not to damage the 2 fibers. You may also use the cable ripcord, if provided, to obtain the necessary strip length.
- 10.2 Terminate the multimode SC connectors per Installation Instructions PN248\* (\* designates the latest document revision level). The Panduit Fiber Optic Termination Kit (FIELDKIT) is required to terminate the SC connectors. Optional Duplex Clip (FSCCLIP-L) can be purchased from Panduit to maintain connector polarity.
- 10.3 Repeat the 2 steps above for the remaining fibers.



#### 11. Terminated Fiber Cable Installation

Route the cable through the 3 cable clips, per the recommended sequence shown. Be careful to make sure that a minimum fiber bend radius of 1" (25.4mm) is maintained during the cable routing. Insert the terminated SC connector ends into the front of the SC adapter modules. Route and install the second terminated SC cable in the same fashion.



#### 12. Tighten Cable Strain Relief Boot

Carefully secure the cable strain relief boot to the fiber cable by tightening the flex tail by hand until the cable does not move within the strain relief. Using a ¾" wrench, tighten the strain relief flex tail an additional ½ turn (5 to 10 in-lbs).



# 13. Verify Operational Connections and Close Hinged Industrial Enclosure Cover

Fully assemble the remaining electronics, turn on the power and verify that the fiber connections operate. If there are any optical performance issues, disconnect the SC and MT-RJ connectors and clean ferrules per step 4.



For Instructions in Local Languages and Technical Support:

www.panduit.com/resources/install\_maintain.asp



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